

■ General Information

Applications

- Immunohistochemistry
 - TUNEL for apoptosis
- In situ hybridization (ISH)
 - mRNA
 - miRNA
 - Fluorescent In situ hybridization (FISH)

Storage and stability

- Individual slide is put in an air-tight pack with inert gas.
- If the slides are stored at 4C, they are good for up to one year.

How processed

- Tissues were initially fixed with formalin except for some of the animal tissues
- Then, dehydrated with gradient ethanol; typically 1 hour each progressive steps; 70%, 90%, 95%, 99%, 100% x 3 times.
- Cleared by xylene, three changes for 1 hour each.
- Infiltrated with 60°C paraffin, three changes for 1 hour each
- Sectioned by microtome in 4 µm thickness

Before use

- Dry slides for 1 hour in a oven at 60C.
- Dewax slides in xylene for 4 minutes x 5 times.
- Hydrate slides in 100%, 95% and 75% ethanol for 3 minutes x 2 times each.
- Immerse slides in tap water for 5 minutes.

Slide orientation

- In most of the slides with 59 or 60 cores, the orientation is as below unless indicated otherwise. #60 location is usually filled with carbon for orientation.

| | | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|----|----|----|
| Shaded area | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| | | | | | | | | | | |

■ Tissue types*

The "tissue type" column in the data sheet denotes the following categories.

1. normal tissue from a non-cancer patient
2. normal tissue from a cancer patient, but the cancer involves unrelated organ
3. normal tissue adjacent to the cancer
4. benign tumor
5. tumor of borderline malignancy or uncertain malignant potential
6. cancer

NBP2-30330 - Human Various Tissue MicroArray (Cancer)

| No. | Age | Sex | Organ | Diagnosis | pTNM | Stage | Tissue type* |
|-----|-----|-----|------------------------------|---|----------|-------|--------------|
| 151 | 55 | M | Lung | bronchioloalveolar carcinoma | T2N1M0 | II B | 6 |
| 152 | 65 | M | Lung | bronchioloalveolar carcinoma | T1N0M0 | I A | 6 |
| 153 | 42 | F | Lung | large cell carcinoma | T2N1M0 | II B | 6 |
| 154 | 48 | F | Lung | adenosquamous carcinoma | T2N0M0 | I B | 6 |
| 155 | 71 | M | Lung | squamous cell carcinoma, well differentiated | T2N1M0 | II B | 6 |
| 156 | 60 | M | Lung | squamous cell carcinoma, well differentiated | T2N1M0 | II B | 6 |
| 157 | 54 | M | Lung | squamous cell carcinoma, well differentiated | T2N0M0 | I B | 6 |
| 158 | 66 | M | Lung | squamous cell carcinoma, well differentiated | T3N0M0 | II B | 6 |
| 159 | 51 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N1M0 | II B | 6 |
| 160 | 70 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N0M0 | I B | 6 |
| 161 | 48 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N1M0 | II B | 6 |
| 162 | 65 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N0M0 | I B | 6 |
| 163 | 74 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N1M0 | II B | 6 |
| 164 | 62 | M | Lung | squamous cell carcinoma, moderately differentiated | T4N0M0 | III B | 6 |
| 165 | 64 | M | Lung | squamous cell carcinoma, moderately differentiated | T1N1M0 | II A | 6 |
| 166 | 68 | F | Lung | squamous cell carcinoma, moderately differentiated | T2N0M0 | I B | 6 |
| 167 | 64 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N0M0 | I B | 6 |
| 168 | 54 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N1M0 | II B | 6 |
| 169 | 54 | M | Lung | squamous cell carcinoma, moderately differentiated | T2N0M0 | I B | 6 |
| 170 | 51 | M | Lung | squamous cell carcinoma, poorly differentiated | T2N0M0 | I B | 6 |
| 171 | 66 | M | Lung | squamous cell carcinoma, poorly differentiated | T2N1M0 | II B | 6 |
| 172 | 64 | M | Lung | squamous cell carcinoma, poorly differentiated | T2N0M0 | I B | 6 |
| 173 | 58 | F | Lung | adenoid cystic carcinoma, metastasis to kidney | M1 | IV | 6 |
| 174 | 57 | M | Lung | large cell carcinoma, metastasis to small intestine | M1 | IV | 6 |
| 175 | 44 | F | Bone, lumbar vertebra | chondrosarcoma, grade I | T3N0M0 | III | 6 |
| 176 | 43 | M | Bone, ilium | chondrosarcoma, grade I | T2N0M0 | I B | 6 |
| 177 | 22 | M | Bone, femur | chondrosarcoma, grade II | T2N0M0 | I B | 6 |
| 178 | 38 | F | Bone, femur | chondrosarcoma, grade II | T2N0M0 | I B | 6 |
| 179 | 54 | F | Bone, rib | chondrosarcoma, grade II | T2N0M0 | I B | 6 |
| 180 | 58 | M | Bone, pelvis | chondrosarcoma, grade IIA | T2N0M0 | I B | 6 |
| 181 | 33 | M | Bone, pelvis | chondrosarcoma, grade IIB | T2N0M0 | I B | 6 |
| 182 | 49 | M | Bone, pelvis | chondrosarcoma, dedifferentiated | T2N0M0 | I B | 6 |
| 183 | 39 | F | Bone, femur | osteosarcoma, fibroblastic | T2N0M0 | II B | 6 |
| 184 | 12 | M | Bone, lower extremity | osteosarcoma, osteoblastic | T2N0M0 | II B | 6 |
| 185 | 22 | M | Bone, knee | osteosarcoma, osteoblastic | T2N0M0 | II B | 6 |
| 186 | 19 | M | Bone | Ewing's sarcoma, metastasis to lung | M1a | IVA | 6 |
| 187 | 26 | F | Bone, tibia | giant cell tumor, malignant | T1N0M0 | I A | 6 |
| 188 | 26 | F | Bone, femur | giant cell tumor, malignant | T2N0M0 | I B | 6 |
| 189 | 23 | F | Bone, wrist | giant cell tumor, recurrent | T1N0M0 | I A | 6 |
| 190 | 41 | F | Bone | giant cell tumor, metastasis to colon | M1b | IVB | 6 |
| 191 | 38 | M | Soft tissue, mediastinum | osteosarcoma, extraskeletal | T1aN0M0 | . | 6 |
| 192 | 53 | F | Soft tissue, back | osteosarcoma, extraskeletal, fibroblastic type | T1bN0M0 | . | 6 |
| 193 | 56 | M | Soft tissue, spermatic cord | leiomyosarcoma | T2bN0M0 | III | 6 |
| 194 | 48 | F | Soft tissue, axilla | liposarcoma, well differentiated | T2aN0M0 | I | 6 |
| 195 | | | Carbon | | | | |
| 196 | 36 | M | Soft tissue, retroperitoneum | liposarcoma, well differentiated | T2aN0M0 | I | 6 |
| 197 | 37 | F | Soft tissue, abdominal Wall | liposarcoma, well differentiated | T2aN0M0 | I | 6 |
| 198 | 56 | M | Soft tissue, thigh | liposarcoma, well differentiated | T2aN0M0 | I | 6 |
| 199 | 81 | M | Soft tissue, mesentary | liposarcoma, myxoid | T2aN0M0 | . | 6 |
| 200 | 62 | F | Soft tissue, popliteal Fossa | liposarcoma, myxoid | T2aN0M0 | . | 6 |
| 201 | 70 | F | Soft tissue, retroperitoneum | liposarcoma, myxoid | T2bN0M1 | IV | 6 |
| 202 | 41 | M | Soft tissue, thigh | liposarcoma, myxoid | T2aN0M0 | I | 6 |
| 203 | 46 | M | Soft tissue, abdomen | liposarcoma, myxoid | T2aN0M0 | . | 6 |
| 204 | 38 | M | Soft tissue, abdomen | liposarcoma, myxoid | T2bN0M0 | . | 6 |
| 205 | 51 | F | Soft tissue, thigh | liposarcoma, round cell | T2aN0M0 | III | 6 |
| 206 | 46 | M | Soft tissue, chest Wall | liposarcoma, pleomorphic | T1aN0M0 | . | 6 |
| 207 | 44 | M | Soft tissue, retroperitoneum | malignant peripheral nerve sheath tumor | T2bN1M0 | IV | 6 |
| 208 | 33 | F | Soft tissue, abdominal Wall | synovial sarcoma | T2aN0M0 | II | 6 |
| 209 | 19 | F | Soft tissue, lower leg | synovial sarcoma | T2bN0M0 | . | 6 |
| 210 | 25 | M | Soft tissue, lower leg | synovial sarcoma | T2bN0M0 | . | 6 |
| 211 | 50 | M | Soft tissue, thigh | malignant fibrous histiocytoma | T2aN0M0 | . | 6 |
| 212 | 50 | M | Soft tissue, lower Extremity | malignant fibrous histiocytoma | T2bN0M0 | . | 6 |
| 213 | 59 | F | Soft tissue, buttock | malignant fibrous histiocytoma | T2aN0M0 | I | 6 |
| 214 | 59 | M | Soft tissue, forearm | malignant fibrous histiocytoma, recurrent | T1bN0M0 | . | 6 |
| 215 | 35 | F | Soft tissue, retroperitoneum | alveolar soft part sarcoma, metastasis to kidney | T2aN0M0 | . | 6 |
| 216 | 49 | F | Soft tissue, shoulder | dermatofibrosarcoma protuberans | T2aN0M0 | . | 6 |
| 217 | 41 | M | Skin, thigh | malignant melanoma | T4aN0M1a | IV | 6 |
| 218 | 64 | F | Skin, thigh | malignant melanoma | T3aN2aM0 | III A | 6 |
| 219 | 66 | M | Skin, sole | malignant melanoma | T4aN2M0 | III B | 6 |
| 220 | 53 | M | Skin, hip | malignant melanoma | T4aN2M0 | III | 6 |
| 221 | 25 | F | Skin, neck | malignant melanoma | T4aN0M1a | IV | 6 |
| 222 | 73 | F | Skin, abdominal wall | malignant melanoma | T4aN0M0 | II B | 6 |
| 223 | 44 | F | Anus | malignant melanoma | T4aN3M0 | III | 6 |
| 224 | 66 | M | Skin | malignant melanoma, metastasis to soft tissue | M1a | IV | 6 |
| 225 | 64 | F | Skin | malignant melanoma, metastasis to axillary lymph node | T3aN2M1a | IV | 6 |
| 226 | 39 | F | Skin | malignant melanoma, metastasis to small bowel | M1c | IV | 6 |
| 227 | 77 | F | Skin | squamous cell carcinoma, well differentiated | T2N0M0 | II | 6 |
| 228 | 48 | M | Skin | squamous cell carcinoma, well differentiated | T2N1M0 | III | 6 |
| 229 | 25 | F | Skin | squamous cell carcinoma, metastasis to skull | M1 | IV | 6 |
| 230 | 46 | F | Breast | invasive duct carcinoma, grade II | T3N1M0 | III A | 6 |

| No. | Age | Sex | Organ | Diagnosis | TNM | Stage | Tissue type* |
|-----|-----|-----|----------------|--|---------|-------|--------------|
| 231 | 44 | F | Breast | invasive duct carcinoma, grade II | T2N1M0 | II B | 6 |
| 232 | 26 | F | Breast | invasive duct carcinoma, grade III | T4N2M0 | II B | 6 |
| 233 | 39 | F | Breast | invasive duct carcinoma, grade III | T3N0M0 | II B | 6 |
| 234 | 33 | F | Breast | invasive duct carcinoma, grade III | T3N1M0 | II A | 6 |
| 235 | 37 | F | Breast | invasive duct carcinoma, grade III | T3N1M0 | II A | 6 |
| 236 | 50 | F | Breast | invasive papillary carcinoma | T2N0M0 | II A | 6 |
| 237 | 32 | F | Breast | mixed invasive ductal and lobular carcinoma, grade II | T3N1M0 | II A | 6 |
| 238 | 47 | F | Breast | invasive lobular carcinoma, grade II | T3N1M0 | II A | 6 |
| 239 | 45 | F | Breast | invasive lobular carcinoma, grade II | T3N1M0 | II A | 6 |
| 240 | 35 | F | Breast | invasive lobular carcinoma, grade II | T2N1M0 | II B | 6 |
| 241 | 80 | F | Breast | medullary carcinoma, grade I | T3N2M0 | II A | 6 |
| 242 | 60 | F | Breast | signet ring cell carcinoma | T3N0M0 | II B | 6 |
| 243 | 43 | F | Breast | phylloides tumor, borderline malignant | T2N0M0 | II A | 5 |
| 244 | 34 | F | Breast | phylloides tumor, malignant | T3N0M0 | II B | 6 |
| 245 | . | . | Carbon | . | . | . | . |
| 246 | 56 | F | Breast | phylloides tumor, malignant | T3N0M0 | II B | 6 |
| 247 | 31 | F | Breast | phylloides tumor, malignant | T3N0M0 | II B | 6 |
| 248 | 51 | F | Breast | phylloides tumor, malignant | T2N0M0 | II A | 6 |
| 249 | 29 | F | Breast | phylloides tumor, malignant, recurrent | T3N0M0 | II B | 6 |
| 250 | 47 | F | Uterine cervix | adenocarcinoma, well differentiated | T1bN0M0 | I B | 6 |
| 251 | 52 | F | Uterine cervix | adenocarcinoma, moderately differentiated | T2bN1M0 | II B | 6 |
| 252 | 62 | F | Uterine cervix | adenocarcinoma, moderately differentiated | T2bN1M0 | II B | 6 |
| 253 | 47 | F | Uterine cervix | adenocarcinoma, moderately differentiated, mucinous, endocervical type | T2bN1M0 | II B | 6 |
| 254 | 54 | F | Uterine cervix | small cell carcinoma | T1bN0M0 | I B | 6 |
| 255 | 63 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN0M0 | I B | 6 |
| 256 | 37 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN0M0 | I B | 6 |
| 257 | 48 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN1M0 | II B | 6 |
| 258 | 65 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T2aN0M0 | II A | 6 |
| 259 | 58 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN0M0 | I B | 6 |
| 260 | 54 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN0M0 | I B | 6 |
| 261 | 48 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN0M0 | I B | 6 |
| 262 | 53 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T2bN1M0 | II B | 6 |
| 263 | 62 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T2bN1M0 | II B | 6 |
| 264 | 44 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN0M0 | I B | 6 |
| 265 | 50 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T2bN1M0 | II B | 6 |
| 266 | 52 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T1bN0M0 | I B | 6 |
| 267 | 56 | F | Uterine cervix | squamous cell carcinoma, keratinizing type | T3bN0M0 | II B | 6 |
| 268 | 51 | F | Uterine cervix | squamous cell carcinoma, large cell keratinizing type | T2bN0M0 | II B | 6 |
| 269 | 35 | F | Uterine cervix | squamous cell carcinoma, large cell nonkeratinizing type | T2bN1M0 | II B | 6 |
| 270 | 59 | F | Uterine cervix | squamous cell carcinoma, large cell nonkeratinizing type | T2bN1M0 | II B | 6 |
| 271 | 32 | F | Uterine cervix | squamous cell carcinoma, large cell nonkeratinizing type | T1bN0M0 | I B | 6 |
| 272 | 52 | F | Uterine cervix | squamous cell carcinoma, large cell nonkeratinizing type | T2bN0M0 | II B | 6 |
| 273 | 47 | F | Uterine cervix | squamous cell carcinoma, large cell nonkeratinizing type | T1bN0M0 | I B | 6 |
| 274 | 56 | F | Uterine cervix | squamous cell carcinoma, large cell nonkeratinizing type | T1bN1M0 | II B | 6 |
| 275 | 59 | F | Uterine cervix | squamous cell carcinoma, large cell nonkeratinizing type | T1bN1M0 | II B | 6 |
| 276 | 57 | F | Endometrium | adenocarcinoma, endometrioid type | T1bN0M0 | I B | 6 |
| 277 | 73 | F | Endometrium | adenocarcinoma, endometrioid type | T1bN0M1 | IV B | 6 |
| 278 | 61 | F | Endometrium | adenocarcinoma, endometrioid type | . | . | 6 |
| 279 | 67 | M | Endometrium | adenocarcinoma, endometrioid type | T2bN1M0 | II C | 6 |
| 280 | 77 | F | Endometrium | adenocarcinoma, endometrioid type | T1cN0M0 | I C | 6 |
| 281 | 77 | F | Endometrium | adenocarcinoma, endometrioid type | T2bN1M0 | II C | 6 |
| 282 | 35 | F | Endometrium | adenocarcinoma, endometrioid type | T1bN0M0 | I B | 6 |
| 283 | 69 | F | Endometrium | adenocarcinoma, endometrioid type | T1cN0M0 | I C | 6 |
| 284 | 34 | F | Endometrium | adenocarcinoma, endometrioid type | T1bN1M0 | II C | 6 |
| 285 | 62 | F | Endometrium | adenocarcinoma, endometrioid type | T3aN0M0 | II A | 6 |
| 286 | 35 | F | Endometrium | undifferentiated carcinoma | T1cN0M0 | I C | 6 |
| 287 | 57 | F | Endometrium | adenocarcinoma, metastasis to ovary, endometrioid type | M1 | IV B | 6 |
| 288 | 35 | F | Ovary | adenocarcinoma, endometrioid type | T1bN0M0 | I B | 6 |
| 289 | 37 | F | Ovary | adenocarcinoma, endometrioid type | T2bN0M0 | II B | 6 |
| 290 | 48 | F | Ovary | adenocarcinoma, endometrioid type | T3N0M0 | II | 6 |
| 291 | 49 | F | Ovary | adenocarcinoma, endometrioid type | T3N0M0 | II | 6 |
| 292 | 47 | F | Ovary | adenocarcinoma, endometrioid type | T3N0M0 | II | 6 |
| 293 | 39 | F | Ovary | adenocarcinoma, clear cell type | T2aN1M0 | II C | 6 |
| 294 | 50 | F | Ovary | adenocarcinoma, clear cell type | T1aN0M0 | I A | 6 |
| 295 | . | . | Carbon | . | . | . | . |
| 296 | 41 | F | Ovary | adenocarcinoma, clear cell type | T2bN0M0 | II B | 6 |
| 297 | 51 | F | Ovary | adenocarcinoma, poorly differentiated | T2bN0M0 | II B | 6 |
| 298 | 15 | F | Ovary | cystadenocarcinoma, mucinous | T1aN0M0 | I A | 6 |
| 299 | 26 | F | Ovary | cystadenocarcinoma, mucinous, borderline malignancy | T1aN0M0 | I A | 6 |
| 300 | . | . | Carbon | . | . | . | . |

TNM and Stage: AJCC Cancer Staging Manual (6th Edition)

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
| 291 | 281 | 271 | 261 | 251 | 241 | 231 | 221 | 211 | 201 | 191 | 181 | 171 | 161 | 151 | shaded area |
| | | | | | | | | | | | | | | 152 | |
| | | | | | | | | | | | | | | 153 | |
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| 295 | | | | | 245 | | | | | 195 | | | | 155 | |
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| 300 | | | | | | | | | | | | | | 160 | |